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TITLE

CHOLESTERIC LIQUID CRYSTAL PHOTOCHROMIC POLYMER MATERIAL AND

OPTICALLY FUNCTIONAL MEDIUM USING THE SAME

ABSTRACT :

PROBLEM TO BE SOLVED: To obtain a cholesteric liquid crystal photochromic polymer

material that shows cholesteric liquid crystal properties, an excellent durability to the

repetition of photochromic reactions and a rich shade variation.

SOLUTION: This photochromic polymer material comprises at least one kind of cholesteric liquid crystal structural units and at least one kind of photochromic structural units. The polymer material is prepared by copolymerizing a non-liquid crystal or liquid crystal photochromic monomer and a cholesteric liquid crystal monomer. The photochromic structural unit includes at least one of a spiro-oxazine structure, a diarylethene structure, a fulgide structure and a fulgimide structure.

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